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Office of Personnel Management

# Marine Cargo Series

## GS-2161

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# Marine Cargo Series

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## SERIES DEFINITION

This series includes all classes of positions the duties of which are to supervise, administer, monitor, or perform work involved in planning and/or directing the loading and stowage of cargo aboard vessels and the unloading of cargo from vessels.

Series coverage is limited to positions concerned with (1) the preparation and review of stowage plans which indicate the location of cargo within assigned space aboard ship and the order in which it is to be loaded and unloaded, (2) the interpretation and implementation of cargo stowage plans during the actual loading, stowage and unloading operations, (3) combined responsibility for both the planning and monitoring of marine cargo loading and stowage operations, or (4) general or administrative duties connected with the supervision or management of marine cargo planning, loading, and stowage.

These standards cover nonsupervisory positions in the Marine Cargo Series.

This series replaces the Marine Superintendent Series, GS-0098. Because the positions are directly concerned with transportation activity and require marine transportation knowledges, the series is recoded to the GS-2100 Group under the more descriptive title, Marine Cargo Series.

## EXCLUSIONS

Excluded from this series are the following:

1. Positions responsible for the receipt, custody, and movement of cargo to and from piers, wharves or warehouses of a marine terminal. Such positions are classifiable in the appropriate series in the [Supply Group, GS-2000](#) or in the appropriate wage board category. However, Marine Cargo Specialists plan the flow of cargo to and from assigned pier and storage areas to maintain an even flow of cargo and keep the pier free of congestion. Positions which involve combinations of both the supply function of receipt, custody, and movement of cargo to and from piers, wharves or warehouses with the marine cargo planning and/or loading functions will be allocated to either [GS-2001](#) or GS-2161 on the basis of the predominant requirements. If marine cargo responsibilities are paramount, the combination does not exclude the position from this series.
2. Positions involving coordination and control of the movement of vessels beyond the terminal area in accordance with planned or emergency schedules. Such positions are classifiable in the [Transportation Operations Series, GS-2150](#).
3. Positions concerned with the dispatch and movement of tugs required to dock vessels at piers or wharves. Such positions are classifiable in the [Traffic Control Series, GS-2151](#) or the appropriate wage board rating.
4. Positions performing clerical work on cargo records incident to documentation of marine cargo operations. Such positions are classifiable in the appropriate clerical series.

*Note:* Work performed on piers tallying cargo as it is loaded or unloaded, recording the shipboard location of stowed cargo, and maintaining records of stevedore labor, indicating such items as hours of work, lost time, and penalty time is normally performed as a regular assignment by hatch clerks, cargo control clerks, or cargo supervisors (Super Cargo). Such positions are excluded from this series and classifiable in the appropriate clerical series. However, if such duties are included as part of the training of Marine Cargo Assistants to provide familiarity with pier and shiploading and discharging methods, application of contract provisions regarding normal, extra labor and heavy lift operations, and vessel chartering provisions and practices the positions are covered by this series.

## CLASS TITLES

Appropriate class titles for positions in this series are:

*Marine Cargo Assistant, GS-5*

*Marine Cargo Specialist, GS-7 and above*

*Supervisory Marine Cargo Specialist*

## OCCUPATIONAL INFORMATION

The Military Sea Transport Service (MSTS) is the agency responsible for providing sea transport to defense agencies, which are the shippers of the bulk of the Government's marine cargo. Shipping space is provided on MSTS owned vessels, on private vessels under charter to MSTS, or on private vessels under shipping contract or commercial terms. On those trade routes or port-to-port routes where vessel operators do not offer space with sufficient frequency to provide timely lift, the shipper service will furnish MSTS with the necessary data to enable MSTS to obtain the desired lift, taking into consideration the type of cargo and kind of shipping space required. MSTS approves all spaces offered by commercial steamship operators prior to assigning the spaces to meet the shipping activities' cargo requirements. The shipper is responsible for accepting or rejecting space offered by MSTS on the basis of the compatibility of the space assigned for stowage of cargo offered.

When the entire space on an MSTS owned or controlled vessel is made available to a single agency, that agency is responsible for preparing the necessary preliminary cargo stowage plan. When space on one vessel is assigned to several agencies MSTS assigns space; each shipper prepares a pre-stowage plan for its assigned space; and the final loading activity prepares the master cargo plan showing the actual location of all cargo. For space chartered on a shipping contract vessel, the shipper prepares the stowage plan subject to approval by the ship's representative. Preliminary stowage plans are prepared in advance of vessel arrival from cargo allocation sheets which list the cargo to be moved. Based on the nature, weight, and measurement of the cargo, the capacity of the vessel, and its ports of call, the Marine Cargo Specialist plans the distribution of cargo in the lower holds, between decks, and on deck. His objective is to obtain maximum utilization of available space within the limitations of the vessel's stability and trim requirements, considering such facts as the measurement of cargo, density,

weight, special stowage requirements, priority designations, accessibility by sequence of discharge, loading and discharging capability of the vessel, and pier facilities. He ensures the effective assignment of manpower and equipment to accomplish the work within the established vessel on-berth time, and reorganizes and replans as a result of diversions, substitutions of vessels, failure of cargo to generate, generation of additional or priority cargo, mechanical breakdowns, etc.

The shipper directs the loading of cargo aboard vessels in accordance with approved cargo stowage plans. During the loading, the Marine Cargo Specialist is primarily concerned with directing or coordinating loading operations on the vessel and pier in the capacity of shipper's representative. This includes making certain that cargo is stowed in accordance with the stowage plan or approving changes thereto. Also, he represents the interests of the Government with respect to cargo loading and unloading to avoid, whenever possible, charges for detention time, extra labor time, invoking of hardship clause, etc. He inspects winches, booms, and other cargo handling equipment aboard the vessel prior to loading operations, is responsible for safety practices and accident prevention measures, investigates all stevedore detentions, extra labor and ship accounting items on the spot, and takes exception to any irregularities, infractions, or deviations from accepted practice.

The physical labor of loading, stowage and discharge is the responsibility of stevedores employed to supervise crews of longshoremen who make up sling loads, truck them to shipside, hoist them in, move the individual packages to point of stowage, and stow them. The stevedore is skilled in the handling of cargo, its stowage, and the expert supervision of labor during a loading or discharge operation. The Marine Cargo Specialist does not exercise supervision over the longshoremen, but does advise the stevedore on any matters requiring corrective or special action, which may include instructions on handling or stowing of special cargo, safety measures to be taken, blocking and bracing needed, etc. The Marine Cargo Specialist's responsibility for "directing" the loading function differs from "supervising" the men doing the physical work in that he is not held responsible for the quality and quantity of work of the individual longshoremen, does not select or evaluate the performance of employees, cannot exercise disciplinary action, etc.

Upon completion of loading, blocking and bracing, the Marine Cargo Specialist prepares the vessel loading report covering any unusual occurrences as loading progressed, and may prepare final cargo stowage plans, reflecting the actual space occupied by cargo in the holds and on deck of the vessel, port of discharge, type of cargo, number of pieces, weight and measurement tons for each block of cargo, etc. An MSTs representative or a ship's officer inspects and approves the stowage as the carrier's agent.

Positions in this series are located at ports and marine terminals worldwide.

## CLASSIFICATION FACTORS

*General:* Two factors, Nature and Variety of Work, and Nature of Supervision Received, are the principal grade-level determinants of positions in this series. In subjourneyman positions the

nature of assignments is deliberately controlled by the supervisor and the level of work is restricted by supervisory direction and review. At the journeyman level, a broad band of mine run assignments are performed without technical supervision. Such assignments may be the result of conditions that exist at some terminals due to the problem nature of the cargo regularly handled, the limitations of vessel space normally available, schedules to be met, etc. They may also occur because there is an established practice of assigning certain recognized problem operations to one individual. When the above pattern is mixed, as in the journeyman assignments performed without technical supervision at auxiliary port locations separated from the main port or terminal (outports), the use of an intermediate grade may be justified.

*Nature and variety of work:* In marine cargo planning and loading, the principal considerations that affect the overall difficulty and complexity of assignments are the nature of the cargo to be shipped, the nature of the space available on the carrier, varying cargo destinations, and the problems involved in relating these considerations. To the extent that the cargo is readily susceptible of stowage and the available vessel space is adequate, problems are minimized. Difficulties develop when cargo is cumbersome to handle, apt to be damaged in transit, etc. Any respect in which vessel space is inadequate will further complicate decisions. Problems due to the nature of the cargo include the special stowage requirements of contaminable, odoriferous, perishable, temperature or moisture susceptible cargo, hazardous cargo (such as explosives, inflammable liquids and solids, corrosive liquids and acids, gases, poisons, etc.) and the location and handling implications of item weight, size, and relative density, etc. Normally there are more stowage considerations to complicate the utilization of vessel capacity when cargo includes a variety of items and types of commodities than for relatively homogeneous cargo. Another basic consideration that influences utilization of stowage space is the destination of the shipment. Cargo stowage decisions must recognize the order in which cargo is to be unloaded. Ordinarily, the problems involved in the development of loading plans and the stowage of cargo are more difficult when they must provide for items to be accessible by sequence of discharge at several ports. Cargo priority designations also affect stowage decisions. Problems due to the nature of the space available arise from the size, location, accessibility, and suitability of the space itself, and from the characteristics of the vessel involved because the stability, draft and trim of the vessel will be affected by the amount and distribution of weight taken on and discharged at each port. As these vessel characteristics differ widely, more varied stowage problems are usually presented when dissimilar types of military vessels and commercial ships are loaded regularly, as compared to the recurring patterns of stowage for use of similar space within the same class of vessel.

When conditions as to cargo, space available, etc., are similar, the functions of planning for cargo stowage and directing cargo stowage are considered to require the same basic knowledges and involve comparable degrees of difficulty, so long as the specialist engaged in the latter function has authority to change the plan as required (e.g., to accommodate additional cargo, additional ports, etc.). Directing unloading operations is considered less difficult and ordinarily is a full-time assignment only for trainee positions.

Other considerations that may affect the characteristic difficulty of cargo planning and loading operations include volume of traffic, coordination of multishift operations, monitoring of loading of two or more vessels simultaneously, physical dispersion of loading and unloading operations, last minute changes in cargo requiring substitution of other cargo, deadlines, changes in vessel schedules and itinerary.

*Supervision received:* Relatively inexperienced Marine Cargo Specialists perform limited assignments under detailed technical guidance and review, or work on the full range of assignments as assistants to higher grade employees to whom questions and recommendations are referred, with subsequent action taken in accordance with the supervisor's authorization. Journeyman Marine Cargo Specialists receive little or no direct technical supervision during the course of their assignments. Work is judged by overall effectiveness, timely accomplishment, economical operation, and the maintenance of good working relationships.

*Related variables:* Factors other than Nature and Variety of Work and Supervision Received also reflect differences in level of difficulty at various grade levels of Marine Cargo Specialist positions, but are not treated separately in these standards because such differences can be assumed to be implicit in the grade-level characteristics discussed. Personal contacts increase in importance as they are related to increasingly complex assignments and increasing authority for independent decisions. The extent to which the exercise of judgment is required for the solution of cargo planning and loading problems is conditioned by the complexity of the assignment and the extent of supervisory control. The scope and importance of decisions vary with the difficulty of the cargo planning and loading operations assigned and the degree of authority for decisive action in scheduling, approving, and revising cargo plans, schedules and operations and for fixing responsibilities for damages, liabilities, etc. Because these are dependent characteristics rather than primary grade-level indices, they do not require separate description in the grade-level portions of this standard.

*Qualifications required:* Positions at lower levels of the Marine Cargo Series require the ability to learn, and at higher levels the ability to apply to increasingly difficult assignments, the skills and knowledges described below:

1. Familiarity with the characteristics of various classes of vessels, and with the types and capacities of deck loading equipment. Understanding of ship specifications, and ability to compute stability factors.
2. Knowledge of cargo characteristics, related stowage requirements, and ability to relate suitability of cargo to vessel space factors.
3. Knowledge of maritime regulations, technical requirements of particular ports and terminals, regulations of MSTs, the Coast Guard, and other inspection and control agencies, and ability to interpret and assure compliance with pertinent marine cargo rules and regulations.
4. Comprehensive knowledge of waterfront operations, accepted methods and practices of commercial vessel operators, docking and berthing procedures and operations, and stevedore



practices and cargo handling methods, and the ability to apply them to prevent irregularities, liabilities, unsafe practices, etc.

5. Familiarity with manifests, cargo projections, load lists, and related cargo papers and ship reports.

*Specialization of Function:* Comments on the tentative draft of this standard indicated that some reviewers favored recognition of functional specializations, e.g., Cargo Loading Planner, Ship Loading Specialist, Cargo Control Specialist, etc. Specialized work assignments are provided for in the standard through work examples, but specialized classes and titles are not considered necessary because the knowledges applied are essentially the same, specialized qualification requirements are not necessary, and there is transferability of Marine Cargo Specialists among the various functions.

### **MARINE CARGO ASSISTANT, GS-2161-05**

Incumbents of positions at this level perform elementary work in the preparation of cargo stowage plans, in observing the loading and discharge of cargo, and related tasks. The work is performed in accordance with specific guides and procedures under close supervisory guidance and control. All work is reviewed for technical accuracy and completeness.

The following are typical examples of work at the GS-5 level:

1. During the loading process, observes that cargo is being loaded in accordance with approved preliminary stowage plan. Annotates plan to indicate authorized cargo substitutions and prepares rough final plan. Observes any unusual occurrences during the loading and calls them to the attention of the supervisor.
2. Prepares final cargo stowage plans and hatch lists showing space occupied by each block of cargo in the hold and on the deck of the vessel, port of discharge, cargo marking, type of cargo, number of pieces, weight and measurement, and whether heavy lifts can be handled by ship's gear for discharge. Prepares specific segments of preliminary loading plans when cargo characteristics and vessel space have been designated by supervisor.

### **MARINE CARGO SPECIALIST, GS-2161-07**

This level includes positions responsible for independently preparing less complex preliminary stowage plans for supervisor's approval (e.g., relatively homogeneous, damage resistant cargo destined for one port when vessel space is generally adequate), for preparing more complex preliminary stowage plans under close supervision and review (e.g., mixed cargo susceptible of damage and contamination, destined for several ports when vessel space is unsuitable in some respects or its use is very restricted by weight and trim considerations); for participating in surveillance over the proper, safe, and efficient loading, unloading and stowage operations on vessels by working as assistant to a supervisor technically qualified in marine cargo planning and loading, or for performing a combination of the duties described above. This is the first level at



which incumbents are given assignments covering the full range of cargo stowage planning and loading activities, subject to relatively close supervision on tasks of average difficulty. Major decisions with respect to changes in preliminary plans and substitutions of cargo in loading are subject to review before being put into effect.

The following are typical examples of work at the GS-7 level:

1. Working under technical supervision, independently prepares or approves uncomplicated preliminary plans and presents completed work to supervisor for approval; subsequently makes revisions to incorporate supervisor's suggestions as necessary. Also makes revisions to incorporate subsequent changes in cargo, vessel space, etc., and again presents plan to supervisor for review. On more complex plans, receives technical assistance from the supervisor and incorporates the supervisor's suggestions and ideas. Prior to vessel arrival, assists the supervisor in such activities as determining the number of ships gangs, carpenters, welders, and heavy lift derricks that will be necessary for an operation, and placing orders for them at daily operational meetings. Upon arrival of the vessel, ascertains that Terminal Safety and Port Maritime Safety Code policies are complied with. May assist in planning, scheduling, coordinating and directing the movement of cargo to and from assigned pier and stowage area in order to maintain an even flow of cargo and keep pier free of congestion.
2. Serves as an assistant to an employee technically qualified in marine cargo planning and loading, in planning and directing or overseeing the loading and stowage of many types of cargo in various combinations of shipments on MSTs, commercial, and MSTs controlled vessels. During the loading process, discusses with supervisor the need for major alteration of preliminary stowage plans to provide for changes in cargo, special priority shipments, rearrangement of cargo, etc., and obtains authorization for necessary changes in stowage. Sees that cargo is properly blocked, braced and lashed and that cargo is placed so that damage may be prevented and noncompatible commodities are not mixed together. Is required to be familiar with Coast Guard regulations pertaining to stowage of dangerous items and the need to load cargo in such a manner as to maintain vessel stability, draft, and trim. Investigates stevedore detentions, extra labor and ship account items.

## **MARINE CARGO SPECIALIST, GS-2161-09**

Positions at this level involve responsible independent performance of cargo planning and loading assignments of substantial complexity. Such assignments will typically include, individually or in limited combinations, any of the types of problems which may occur in cargo planning or loading, but they do not typically include situations in which many or all of these problems occur in combination in individual planning or loading assignments. In other words, assignments will regularly include problems created by dangerous or "special handling" cargoes, by limited or unsuitable vessel space, or by many discharge ports, but will not ordinarily require balancing of problems of all three types when no one consideration is paramount. Ingenuity and resourcefulness are applied in achieving maximum utilization of vessel space, arranging for substitute cargo, accommodating to changes in vessel itinerary, facilitating loading and unloading operations and providing solutions to problems. Assignments are performed independently with

results reviewed for overall adequacy. Loading operations typically require unreviewed on-the-spot decisions in order to avoid interruption of work. Positions in this class may or may not involve limited supervision as a "team leader" over lower grade employees. Such supervision does not affect the grade level of the work described.

The following are typical examples of work at the GS-9 level:

1. Working under the general supervision of an employee technically qualified in marine cargo planning and loading who provides brief oral instructions and advice and is consulted on departures from established operating practice, studies booking information which indicates the number of tons of cargo scheduled to be lifted in an MSTs ship and the selected ship's characteristics relative to stowage space, location, cargo handling facilities, weight and cube measurement of cargo, deterioration and hazard characteristics, order of points of discharge and unloading facilities at ports of call, and types of cargoes involved. Considers such other factors as point of local loading, stevedores available, types of loading equipment at terminals to be used in conjunction with ship's winches, booms, etc. Based on foregoing considerations, develops or reviews preliminary stowage plans which reflect how and where cargo is to be stowed, indicating number of hold, level, etc. Develops a trim scale which is used in conjunction with these plans to arrive at a satisfactory "drag" when ship is loaded.
2. Is assigned to oversee and coordinate the loading and stowage of all types of cargo in accordance with approved cargo stowage plans. Prior to commencement of loading operation, inspects vessel space allocated by MSTs to determine if it is suitable and in condition to receive cargo. Determines and arranges for the required labor crews and equipment by contacting responsible office and indicating requirements. Plans and orders the delivery of cargo to piers or shipside to maintain a continuous flow of cargo to the ship. Observes loading operation to insure adherence to approved cargo stowage plans and terminal cargo loading and stowage regulations and procedures. During loading, confers with stevedore foreman on methods of handling cargo, rearrangement of cargo, changes in original plans due to changes in shipment priorities, problems of protection of cargo, etc. Secures concurrence of ship's representative on all changes in previously approved plans, and prepares final cargo stowage plan. Investigates all stevedore detentions and extra labor on piers and ship. Prepares vessel loading report. Is authorized to sign timekeeping reports approving detention, extra labor, deadtime, and similar items, and to certify for payment bills rendered by the stevedore. Makes a final inspection upon completion of loading operation to insure that all cargo is properly stowed, blocked, and braced, and secures signature of ship's representative.
3. At a terminal or port, is responsible for the preparation, planning, loading, and stowage of all types of cargo. This includes the preparation of preliminary stowage plans for Military Sea Transport Service approval or stowage plans when appropriate. Deals with the Military Sea Transport Service and other agencies to arrange cargo movements. Performs the work described in Paragraph 2 above. Positions of this type are located in a supply or a transportation organization and are subject to very general supervision.

## **MARINE CARGO SPECIALIST, GS-2161-11**

At this level, a Marine Cargo Specialist is responsible for planning and/or loading operations which present a concentration of difficult problems. The incumbents of positions at this level are considered expert in their field and work under general direction without technical supervision. The demand for best available solutions to the varying complex problems characteristic of operations at this level makes decisions dependent upon a high degree of resourcefulness, ingenuity, and sound judgment.

By contrast to assignments described at GS-9 which include a variety of individual planning and loading problems within the range of conventional solution, the pattern of operation at the GS-11 level is characterized by the presence of combinations of considerations beyond the usual range because they require balancing of many conflicting considerations and because the degree of effectiveness that can be realized in prompt, efficient, economical cargo movement is critically dependent upon the level of knowledge and judgment which the responsible Marine Cargo Specialist can bring to bear on his decisions.

The following are typical examples of work at the GS-11 level:

1. At a port where there are a number of unusually complex cargo planning and loading operations, incumbent is regularly given the most difficult assignments. These involve responsibility for cargo planning and/or loading operations which normally present a combination of difficult problems in maximum utilization of vessel space and movement of cargo. The total responsibility of managing the operation is characterized by the complexity of the plans developed and/or applied in the normal work situation, the variety of items that present special loading and stowage problems, the wide variation in vessel structures which necessitate on-the-spot stowage plan adjustments, the inadequacy of ship's gear and facilities to the cargo to be moved, the handling of priority cargo and a high volume of traffic, and other conditions which serve to complicate normal cargo planning and stowage.
2. As a marine cargo specialist at a terminal, incumbent is responsible for assigning vessel space when such assignment involves continuing responsibility for planning and coordinating space allocations for the movement of many different shipments from different sources by means of a number of ships operating on varying schedules. Such space assignment involves reconciling a wide range of problems arising from the diverse nature of the shipments, from the varying space and facilities of the ships, from the schedules which the shippers want to meet, from the varying schedules of the ships, and from the number of stop-off points involved. Incumbent receives shipper's cargo lists and allocates space on each ship to be loaded or discharged. Takes into consideration the depth of the waters to be traversed, the vessel's permissible loads and stresses and most economical steaming draft, the effect of stability and trim of the distribution of the cargo in the various sections of the ship as changes occur at the various ports, the facilities of the vessel for proper stowage of the cargoes involved, and the special construction, facilities and limitations of the particular terminal concerned. Approves or disapproves shipper's prestowage plans, and makes decisions on cargo substitutions to meet loading schedules, considering the ship's condition not only at the port but also as successive cargoes are subsequently loaded and discharged.